

Sustainability in the NHS

- A system that is *wasting* away

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“If the global healthcare system were a country, it would be the 5th largest greenhouse gas emitter on the planet”.

Turning off lights
when room not in
use

Not leaving the tap
running when
brushing teeth

Layering up
before
turning on
the heating

Bringing it home –
The current energy crisis

Changing to
energy saving
lightbulbs

Changing to
sustainable energy
sources to power the
home

Short
showers

???

???

Bringing it to work
-NHS Net Zero by 2028/2032

???

???

MAJOR EMISSIONS

CH₄

N₂O

SF₆

CO₂

CFCs

PFCs

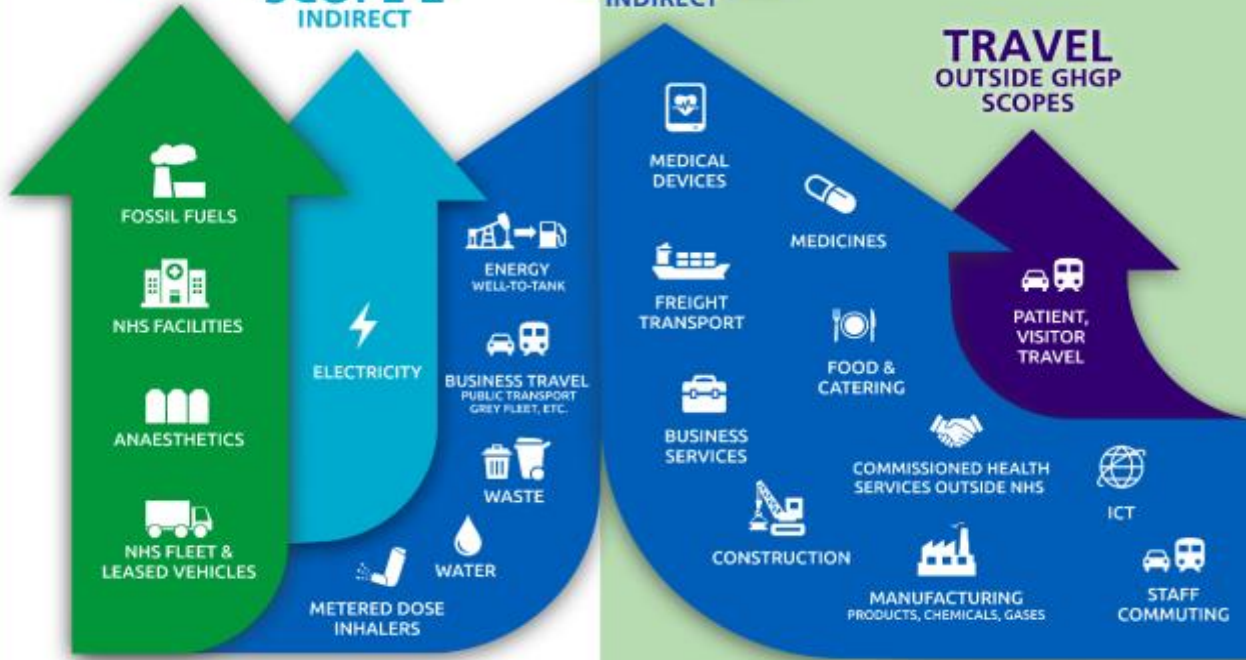
HFCs

SCOPE 1
DIRECT

SCOPE 2
INDIRECT

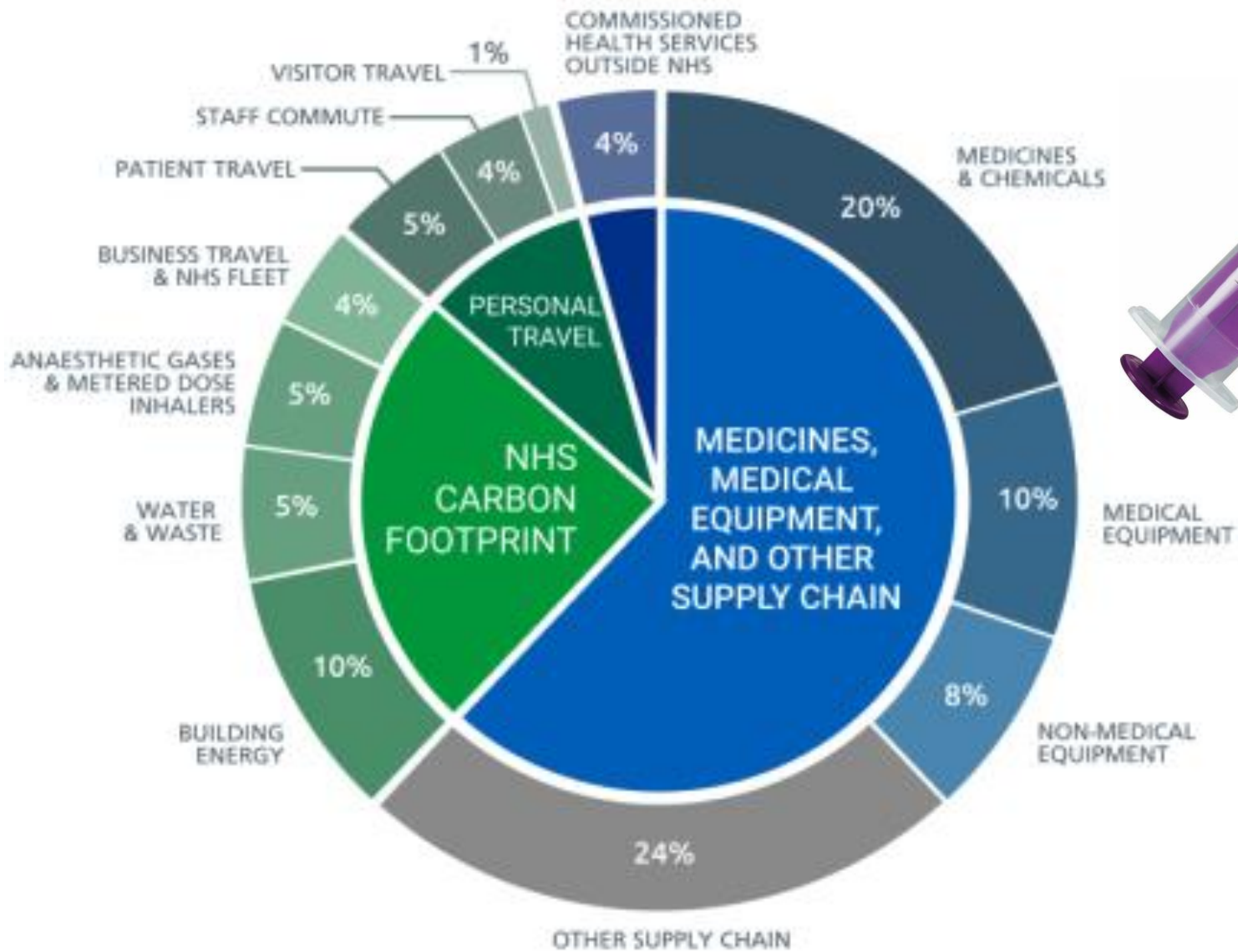
SCOPE 3
INDIRECT

TRAVEL
OUTSIDE GHGP
SCOPES



NHS CARBON FOOTPRINT

NHS CARBON FOOTPRINT PLUS



What does this have to do with paediatric critical care?

PICU Opportunities for Change

TABLE 1 | Opportunities to reduce emissions in pediatric critical care.

Areas of improvement in PICU	Opportunities for change
CLINICAL CARE	
<ul style="list-style-type: none">• Medications	<ul style="list-style-type: none">• Reuse, limit amount discarded.• Preference for those less harmful to environment• Environmental rating for drugs [34]• Become “critical consumers” and purchasers<ul style="list-style-type: none">◦ Make inquiries over environmental costs, possible harmful effects, sustainability, and the existence of alternatives
<ul style="list-style-type: none">• Consumables, including single use plastic	<ul style="list-style-type: none">• Reduce, reuse, and recycle [24]<ul style="list-style-type: none">◦ Requires separating waste into infectious and non-infectious
<ul style="list-style-type: none">• Telemedicine	<ul style="list-style-type: none">• Promote increased use• Limit unnecessary travel and transfers
<ul style="list-style-type: none">• Waste and linen	<ul style="list-style-type: none">• Promote recycling<ul style="list-style-type: none">◦ Increase availability of recycling bins• Use minimum temperature “allowable” to clean linen
<ul style="list-style-type: none">• Equipment	<ul style="list-style-type: none">• Advocate for reprocessing of old equipment• Ensure energy efficient• Ensure off when not in use
<ul style="list-style-type: none">• Organizations	<ul style="list-style-type: none">• Petition for financial divestment from fossil fuels• Encourage further collaboration between units• Research into future effects of climate change

1. WHO NEEDS SPRAY ANYWAY? - RECOVERY TEAM

TEAM MEMBERS: Helen Spencer Jones (Staff Nurse), Emily Young (Deputy Sister), Sharon Clyde (Assistant Recovery Practitioner).and Joao Fontes (Staff Nurse).



Aim: To reduce the usage of ethyl chloride spray for testing spinal/epidural blocks in RBH Recovery from baseline use (4 cans per week in recovery) to 1 can or fewer by using an alternative that has a lower environmental impact.

Background: The staff were asked to stop using ethyl chloride spray in recovery and try 'cold sticks' (solid stainless-steel sticks with handles that can be reused and kept in the fridge) for testing spinal/epidural blocks, recording their findings at each use on a tool designed by the Green Recovery Team.

Reducing unnecessary cannulation at Charing Cross Hospital



The issue

Over 1.4% of NHS supply chain emissions are due to single-use plastics. The NHS has committed to a 10% reduction in clinical single-use plastics in the short term, eventually saving a total of 224 ktCO₂e.

The emergency departments at St Mary's Hospital and Charing Cross Hospital, both part of Imperial College Healthcare NHS Trust, treat a range of life-threatening injuries and illnesses. Patients who clinicians believe might be seriously ill and attend Accident and Emergency (A&E), routinely receive a cannula just in case it is needed to support the administration of fluids and medicines. However, a significant proportion of these are not actually required during a patient's time in A&E, contributing to a waste of equipment and staff time, as well as patient discomfort and increased risk of infection.

Paediatric Critical Care Unit

Nottingham Children's Hospital



- Single Use
- Disposed of in a sharps bin

Reusable Enteral Syringes in the Critical Care Environment

- Reusable enteral syringes
- Washed after each use in a nominated sink
- Disposed of after 7 days
- Stored at the bedside in own container

Cost Savings – Per syringe

Single Use

Syringe size (ml)	Cost per syringe (p)
60ml	45p
20ml	25p
10ml	20p
5ml	7p
3ml	8p
1ml	8p

Reusable

Syringe size (ml)	Cost per syringe (p)	Saving
60ml	30p	15p
20ml	18p	7p
10ml	13p	7p
5ml	8p	-1p
3ml	8p	N/A
1ml	8p	N/A

Example: Patient A (High syringe use)

Long term ventilated patient, who requires in excess of 200 syringes of varying sizes per week.

	Single Use	Reusable
Cost per week	£15.32	£0.72
Cost per year	£796.64	£37.44

Using the SUSQI carbon footprint calculator

“What is a carbon footprint?”

Six different types of gases are commonly included in a carbon footprint; as each has a different global warming potential, the quantities are expressed in “carbon dioxide equivalents” (CO₂e).

The impact of a QI project on the NHS carbon footprint can be estimated by converting data for example on services, consultations, hospital admissions, travel and other activities into kilograms of CO₂e.”

(SusQI, Centre for Sustainable Healthcare)

Example: Patient A (High syringe use)

PER YEAR	10,400 Single Use	1,040 Reusable
CO ₂ e per year	5.6 tonne CO₂e	561 kgCO₂e

It would take 50 trees a whole year to capture just one tonne of CO₂e

Roll-out

Reusable Enteral Syringes: Standard Operating Procedure
 Holly Chandler
 20th February 2020
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Standard Operating Procedure



SOP Number	NCHSOP2	Procedure	Reusable Enteral Syringes use on Long Term Ventilation Patients on PCCU
Author	Holly Chandler	Consultation Process	EBP Council, PCCU Educators
Implementation Date	September 2021	Expiry Date	September 2024
Ratification by	EBPc-PAN		

Document Control

Current Document	Version Number	Date From	Date to	Author	EBP Council Meeting Date
Yes	V2	September 2021	September 2024	Holly Chandler	15 September 2021

Reusable Medicina ENFIT enteral syringes

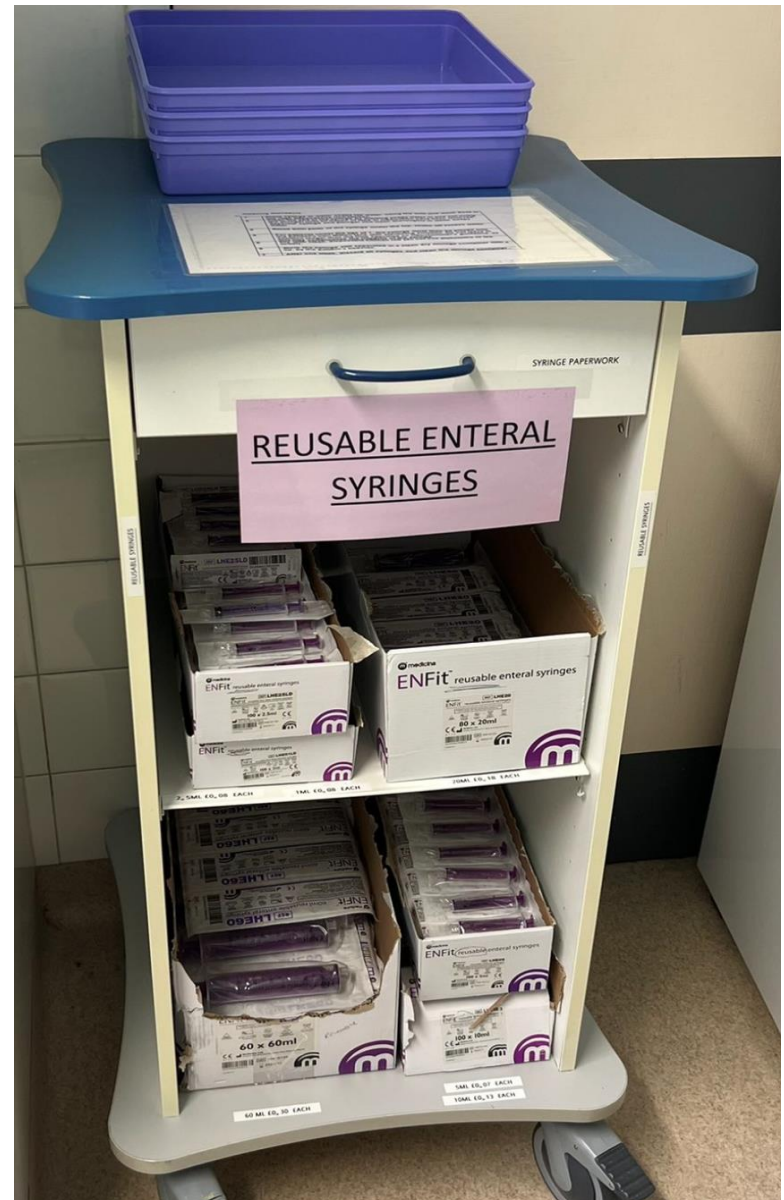
Reusable Medicina ENFIT enteral syringes are used to measure out doses of enteral medication and feed. They come in the following sizes: 60ml, 20ml, 10ml, 5ml, 2.5ml and 1ml and are stored separately in the long term ventilation cupboard on paediatric high dependency. Reusable syringes are to be used for medically stable long term ventilation patients only on paediatric critical care by nursing and medical staff, nursing associates, students and parents. Users of reusable enteral syringes must be given a copy of these guidelines to read and understand before use.

Aim

The aim of this document is to guide healthcare professionals on paediatric critical care in the correct use, cleaning and storage procedure for reusable Medicina ENFIT syringes.

Storage

Reusable Medicina ENFIT enteral syringes are single patient use. They must be discarded every week (Sunday) and replaced with new reusable syringes. The change of syringe date will be added to the long term ventilation patient's monthly checklist document to ensure accountability and adherence. These reusable syringes are to be disposed of as per the local waste management policy ([Waste Handling and Management Policy – HSI/EO17](#)). Current practice is in a



Barriers and Challenges

- **Extra time**
- **Extra water / washing facilities**
- **Parents perception of single use being better**
- **Availability of syringes of NHS supply chain**
- **Education to large workforce**

What next?



Faye Hill
@fayejoanne88

Replying to @nursehol @PCCUatNCH and @liz_bailey772

You have no idea how happy this makes me! I will see if D34 can get on board too 😊



Clare Topping PhD ❤️💚
@enviromentalist

Look @hollyslyne @ros012345 do you think we could do this for feeds? 📌



Emily Parker @emilyrpar... - 15/08/2022 ...
Replying to @ecoboyatheart @nursehol and 2 others

Brilliant. I always wondered why these were single use. Would love to meet @nursehol @liz_bailey772 @PCCUatNCH and hear how you implemented this.



Clare Nash ❤️💚 RN 🌍 #Followbac...
@ClareNash20

Replying to @nursehol @PCCUatNCH and @liz_bailey772

Amazing well done. I didn't know they marketed reusable ones! Are you writing a case study on it! Sounds a great carbon saving



Ros Pounds @ros012345 - 14/08/2022 ...
Replying to @nursehol

Hi @nursehol thanks for doing this, please could you share with us in NGH. Thank you! 😊



Louise Kirk RN, Bsc(hons) 📧🌻📺👍 ...
@lulukirk

@nottmchildrens
Saving money and the planet, fabulous idea Holly! What else can we be resourceful with? 😊

Thank you so much for listening

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